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Intergenerational transmission of worklessness: Evidence from the Millennium Cohort and the Longitudinal Study of Young People In England

Centre for Analysis of Youth Transitions

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ABSTRACT

This project investigated the extent of parental worklessness in families with young and teenage children, and determined how parental worklessness impacts on children's cognitive ability, education attainment, behaviours, attitude to school, academic aspirations and experience of the transition from school to work.

We found that parental worklessness was significantly associated with:

- poorer academic attainment and behavioural adjustment of young children (at age 7)
- poorer academic attainment (GCSE point scores) of young people (at Key Stage 4 (KS4))
- with being not in education, employment and training (NEET) and with being NEET for longer (months spent in NEET) in late adolescence.

This result was obtained even after allowing for a number of other socio-economic risks facing these children and young people (e.g. low income, low parental education level). Though it must be stated that much of the association (but not all) between parental worklessness and these outcomes was attributable to these other risk factors facing workless families.

Parental worklessness had no independent effect on a number of other outcomes, such as children's wellbeing (not being happy at school, being bullied and bullying other children), feelings of lack of control, becoming a teen parent, and risky behaviour.

This evidence provides limited support for a policy agenda targeted *only* at getting parents back into work. It was generally not parental worklessness per se that caused poorer outcomes in childhood and adolescence but rather the complex needs and numerous socio-economic risks faced by workless families.

Our report cannot determine whether we should tackle the underlying *sources* of these risks (e.g. family poverty, poor parental education etc.) or deal directly with the *consequences* of these risks (e.g. poor achievement of young people at KS4; experience of NEET). What our research does clearly show is that policy needs to not only target getting parents back into work but also to address the other risks that these children and their families face.

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Executive Summary

What were the main aims of the research?

The main aims of the research were threefold:

- a. to investigate the extent of parental worklessness in families with young and teenage children and to map continuity and change in household¹ worklessness
- b. to determine how parental worklessness impacts on children's cognitive ability, education attainment, behaviours, attitude to school, academic aspirations and experience of the transition from school to work. Our research included a focus:
 - I. on children in early primary education (KS1) to gauge early scarring effects from household worklessness and
 - II. on young people making the transition from school to work to identify any inter-generational link between parental worklessness and the young person's likelihood of being *Not in Education, Employment or Training* (NEET).
- c. to assess the role of potentially protective factors that might enable children and young people to overcome the effects of parental worklessness.

What data were used?

The research used secondary analysis of two large-scale longitudinal national datasets. The Millennium Cohort Study (MCS) was used to investigate families who had young children born in 2000 through to them being age 7 in 2007. The Longitudinal Study of Young People in England (LSYPE) was used to investigate families who had teenaged children between 2004 to 2009. Measures of academic achievement, namely scores from Key Stage tests from the National Pupil database, were merged into both datasets.

How was parental worklessness measured?

We measured parental worklessness at the household level, so a household was identified as workless when all parents living in the household were out of work – i.e. in a two-parent family both parents were not in work; or in a single parent family the single parent was not in work. Both datasets are longitudinal which

¹ Note that we only considered whether or not the parents in the household were working or otherwise. In workless households there may have been other individuals in the household who worked, such as grandparents.

allowed us to distinguish between families who were persistently workless over the period, those who moved in or out of worklessness and those who were continuously in work.

What were the main findings?

Summary findings for each of the questions we posed above are presented below.

Aim 1: Investigate the extent of parental worklessness in families with young and teenage children and to map continuity and change in household worklessness.

1. What proportion of children and young people lived with workless parents?

Between 12-15% of children and young people lived in workless families in any particular year in our data. These findings correspond to findings from the 2010 Labour Force Survey. The majority of parents in our samples were always working (73% in MCS and 82% in LSYPE). In MCS about 20% of households moved in and out of work during the observation period, as did about 7% of households in LSYPE. In both studies about one in ten households experienced persistent parental worklessness.

2. Were there regional differences in parental worklessness?

We found variation in rates of parental worklessness across the regions. Rates of persistent worklessness were highest in London, followed by the northern regions. When other potential risk factors (such as family demographics, single parenthood, poverty, social housing, and health) were taken into account, region *per se* was not significantly associated with worklessness.

3. What were the characteristics of families experiencing long-term parental worklessness?

Having two parents, either of whom could be working, gave two parent families more chance of avoiding worklessness. In the MCS we found rates of persistent worklessness to be three times higher amongst single parent families than in couple families. In the LSYPE we found rates of worklessness to be five to six times higher amongst single parent families, which may reflect the particular difficulties faced by these families in trying to combine work and family responsibilities.

Workless households with young children aged 0-7 years (MCS) and those with teenagers (LSYPE), were also more likely to have the following characteristics:

- a single parent
- a younger mother
- older mothers (in LSYPE only)
- more children
- in social housing or private rented accommodation
- parents with no or low level of qualifications
- parents who did not acquire additional qualifications during the period
- living in income poverty
- living in a deprived area
- family instability, e.g. losing a partner through divorce or separation (especially among the temporary workless)
- a parent with a long term limiting illness
- English as an additional language (in LSYPE).

In the following we refer to these factors as ***‘interlinked risks’***.

Aim 2: How does parental worklessness impact on children’s cognitive ability, education attainment, behaviours, attitude to school, academic aspirations and experience of the transition from school to work.

4. What was the impact of parental worklessness on the early academic and behavioural adjustment of young children (at age 7)?

Using MCS data we found strong two way associations between parental worklessness and early cognitive, academic and behavioural development of young children (at age 7). Children growing up in workless households had poorer key stage 1 writing, reading, mathematics and science attainment. They also had lower cognitive ability, as measured by British Ability Scale tests and more behavioural problems, as measured by the Strengths and Difficulties Questionnaire. The strongest associations were found for persistent parent worklessness and these outcomes.

However, we needed to allow for other factors that influence these outcomes and that are also correlated with parental worklessness – the ‘interlinked risk factors’ identified in point 3. We took account of these interlinked risk factors, and found a much weaker, though statistically significant relationship between persistent parental worklessness and the cognitive, academic and behavioural outcomes of their children.

We then allowed for potential '**protective factors**' (such as having positive school experiences, e.g. whether the child liked school; parental expectations for their children, and school characteristics) that might reduce the effects of both parental worklessness and other risks. When we allowed for these potentially protective factors, the relationship between parental worklessness and some academic and cognitive outcomes (key stage 1 writing test for example and word reading assessed with the British Ability Scales) became statistically insignificant. For the other outcomes (e.g. key stage 1 reading, math and science) including the protective factors reduced but did not eliminate the statistically significant relationship between parental worklessness and the outcome. *After controlling for the potential protective factors, persistent parental worklessness remained significantly negatively associated with reading, mathematics and science test scores, some measures of cognitive ability and positively associated with teacher ratings of the child's behaviour problems.*

Parental worklessness, in particular persistent worklessness, was a risk factor associated with poor cognitive development, academic attainment and behavioural adjustment of young children (at age 7), although much (but not all) of this association was attributable to other family characteristics.

5. *What was the impact of parental worklessness on the wellbeing of young children (at age 7)?*

Children in workless families were more likely to be bullied, to bully others and to be unhappy at school but this was *not* due to the worklessness itself but rather attributable to other characteristics of the household, such as lone parenthood or parental health (i.e. the interlinked risk factors).

6. *What was the impact of parental worklessness on the academic outcomes of young people at KS4?*

Using LSYPE data, we found a statistically significant association between household worklessness and academic outcomes at KS4 and at KS5 (specifically total GCSE scores, getting 5 A*-C GCSEs and applying to university). Once we allowed for interlinked risk factors (e.g. parental education, lone parenthood, parental health, and income poverty), the relationship between parental worklessness and most teen academic outcomes became non significant. *However, the negative relationship*

between persistent parental worklessness and total GCSE point score remained significant (though modest in size). Most (but not all) of the negative effect of worklessness on teen academic outcomes, was attributable to other risk factors that young people in workless families faced.

7. *How did parental worklessness combine with other risk factors to influence the likelihood of young people ending up Not in Education, Employment or Training (NEET)?*

Young people whose parents had two or three years of worklessness had an increased risk of being NEET at age 18 and more months of being NEET from age 15-18 - even when the interlinked risk factors were controlled for (e.g. socio-economic status, parental education and parental health). This suggests that parental worklessness was an independent risk factor associated with the young person being NEET. We also found that the link between parental worklessness and being NEET was somewhat stronger for those young people in families that experienced temporary parental worklessness as compared to families that experienced persistent worklessness during the period. We concluded that there is some evidence of an intergenerational transmission of worklessness, although this result must come with the caveat that it may be the unobserved characteristics of parents who become workless or of their adolescent children that explain this result and we have not necessarily proved a causal inter-generational relationship.

8. *Were certain combinations of family risk factors particularly damaging to young people's early employment prospects?*

Evidence from LSYPE suggested that parental worklessness had a more negative impact on young people's chance of employment if a young person simultaneously faced many other types of socio-economic disadvantage, such as low parental education and being in poverty. This highlights the importance of taking into account multiple risks instead of focusing on parental worklessness as a single risk factor in isolation.

9. *What was the impact of parental worklessness on the attitudes, aspirations, and values of young people at KS4?*

Using LSYPE, we found only a weak relationship between parental worklessness and young people's intentions to remain in education past age 16 and this relationship was only significant before the interlinked risk factors, such as parental education, were taken into account. We found a

slightly stronger association between parental worklessness and young people's negative attitudes to school, particularly where parents were temporarily workless. Temporary parental worklessness, and indeed persistent worklessness, may of course be associated with other significant life events that influence outcomes. We allowed for some of these in our model, e.g. marital breakdown. However, there may be other events faced by these young people that are correlated with parental worklessness and also have a negative impact on their outcomes.

10. Was the worklessness of parents associated with particular psycho-social difficulties experienced by young people making the transition from school to work?

The research looked at a range of psycho-social outcomes. These psycho-social factors were measured in the LSYPE data in the later teenage years after young people had passed compulsory schooling age, and included feelings of lack of control (as measured by locus of control), criminal behaviour, alcohol/ drug use, and teenage parenthood. Not all of these outcomes were associated with parental worklessness even in the bivariate analyses. For those that were most strongly related to parental worklessness – namely feelings of lack of control, criminal behaviour, and teenage parenthood – the association was no longer statistically significant when other characteristics of the household (i.e, the interlinked risk factors) were taken into account. This suggests that parental worklessness was not a causal factor influencing these outcomes but rather one of many other forms of socio-economic disadvantage influencing these outcomes.

Aim 3: Can we identify potentially protective factors that might enable children and young people to overcome the effects of parental worklessness?

11. Were there factors that appeared to protect children at KS1 and young people at KS4 from any negative impact from parental worklessness?

The analysis did not conclusively identify specific factors that protected young people who lived in workless families from the negative outcomes discussed above. However, there was evidence that at KS1 positive school experiences (child likes school, has friends at school) and school characteristics (a lower proportion of students registered as Special Educational Needs or eligible for Free School Meals) could reduce or remove the association between parental worklessness, especially regarding KS1 writing. At KS4 parents' engagement in their children's

education (for example by attending parents' evenings and speaking to teachers about schooling) reduced or removed the association between parental worklessness and poor academic outcomes. Young people's engagement with education, particularly wanting to stay on in full-time education and not playing truant also reduced or removed the association between parental worklessness and outcomes, as did some school characteristics, such as having a lower proportion of students registered as Special Educational Needs or eligible for Free School Meals. Again we cannot say these factors *cause* individuals to avoid the negative effects from parental worklessness as it may be that households that experience environments with these protective factors are inherently less likely to have children who have negative outcomes anyway.

What are the implications for policy?

This work is relevant to cross government policy concerns, including its focus on the 120,000 most troubled families and the multiple risks they face, the Child Poverty Strategy² and the Social Mobility Strategy³.

The general conclusion from the study is that parental worklessness was significantly associated with poorer academic attainment and behavioural adjustment of young children (at age 7), academic attainment (GCSE point scores) of young people at KS4, with being NEET and with being NEET for longer (months spent being NEET) in late adolescence, even after controlling for a number of linked risk factors. However, controlling for the linked risks considerably reduced the association between parental worklessness and these outcomes, suggesting that a large proportion of the association between parental worklessness and these outcomes was attributable to the clustering of other risk factors facing workless families. Further, for a number of other outcomes, such as indicators of children's wellbeing (not being happy at school, being bullied and bullying other children), feelings of lack of control, becoming a teen parent, and risky behaviours, it was not parental worklessness per se but rather its combination with a range of other risk factors that negatively influenced outcomes. Once we allowed for the multiple socio-economic risks faced by children and young people in workless families, parental worklessness per se no longer showed a significant association with these outcomes. Furthermore we found that whilst a number of potential protective factors reduced the association

²

<http://www.education.gov.uk/childrenandyoungpeople/families/childpoverty/a0076385/child-poverty-strategy>

³ <http://www.dpm.cabinetoffice.gov.uk/news/social-mobility-strategy-launched>

between parental worklessness and the outcomes, the role of these protective factors was relatively small.

The evidence presented in this report therefore gives limited support to a policy agenda targeted *only* at getting workless parents back into work. It was not parental worklessness per se that caused poorer outcomes in childhood and adolescence but rather the complex needs and numerous socio-economic risks faced by workless families. This suggests the need to tackle the wider range of risks that workless families face. In terms of the timing of any policy intervention, we found limited evidence that parental worklessness impacted on children's academic achievement more strongly when they were young (at age 7), compared to at KS4.

Our report cannot determine whether we should tackle the underlying *sources* of these risks (e.g. family poverty, poor parental education etc.) or deal directly with the *consequences* of these risks (e.g. poor achievement of young people at KS4). What our research does show is that a policy that is targeted only on getting parents back into work is unlikely to produce large benefits for their children, unless the other risks that these children and their families face are also reduced or removed.

1 Introduction

The aims of this study were to examine continuity and change in the prevalence of household worklessness among current cohorts of parents with dependent children and evaluate its impact on children's cognitive ability, education attainment, behaviour adjustment, attitude to school, academic aspirations and their transition from school to work. Drawing on evidence from the UK Millennium Cohort Study (MCS) and the Longitudinal Study of Young People in England (LSYPE), the research included a focus on children in primary education (MCS) to gauge early potential scarring effects from household worklessness and on young people (LSYPE), to consider the transition from school to work and to identify any inter-generational link between parental worklessness and the young person's likelihood of being *Not in Education, Employment or Training* (NEET). We were also interested in uncovering the role of potentially protective factors that might enable children (at age 7) and young people (at KS4) to overcome the effects of parental worklessness.

In particular we aimed to answer the following research questions:

1. *What proportion of children and young people lived with workless parents?*
2. *Were there regional differences in parental worklessness?*
3. *What were the characteristics of families experiencing long-term worklessness?*
4. *What was the impact of parental worklessness on the early academic and behavioural adjustment of young children (at age 7)?*
5. *What was the impact of parental worklessness on the wellbeing of young children (at age 7)?*
6. *What was the impact of parental worklessness on the adolescent academic outcomes of young people at KS4?*
7. *How did parental worklessness combine with other risk factors to influence the likelihood of young people ending up Not in Education, Employment or Training (NEET)?*
8. *Were certain combinations of family factors particularly damaging to young people's early employment prospects at ages 15-18?*
9. *What was the impact of parental worklessness on the attitudes, aspirations, and values of young people at KS4?*
10. *Was the worklessness of parents associated with particular psycho-social difficulties experienced by young people making the transition from school to work?*

11. Were there factors that appeared to protect young people from any negative impact from parental worklessness?

In the next section we describe how our research contributes to the existing evidence on this issue. In section 3 we describe our data and discuss the prevalence of parental worklessness in the two data sets that we use. In section 4 we examine the characteristics of families experiencing worklessness, identifying interlinked risk factors (defined below) and determinants of parental worklessness. In section 5 we assess the impact of parental worklessness on the outcomes of children (at age 7) and young people (at KS4), controlling for the interlinked risks. We also investigate potential protective factors enabling young people to overcome any negative effects from household worklessness that we observe.

1.1 Background to the study: What do we know

The United Kingdom has an above average proportion of adults living in workless households compared to the EU. 11.9% of adults age 18-59 were living in workless households in the UK in 2010 compared to an average of 10.4% of adults in all 27 EU countries (Eurostat data from 2010, <http://ec.europa.eu/eurostat>), and household worklessness is an issue of UK policy concern (e.g. Esping-Andersen 2002; OECD 2004; UNICEF 2007; Cabinet Office, 2010). Furthermore, the UK has a higher proportion of its children living in workless households than almost any other European Union country, second only to Ireland and almost twice that in France and Germany (Eurostat data from 2010, <http://ec.europa.eu/eurostat>). 13% of households with dependent children were workless in the second quarter of 2011, which equates to just over one million workless households with dependent children (ONS, 2011, for reviews on household joblessness see also OECD 2008; ONS, 2011; De Graaf and Ultee 2000; Gregg and Wadsworth 2001). This situation is not likely to improve in the near future, given the current economic depression and increasing pressures on families with dependent children. Given the relatively high prevalence of children living in workless households in the UK, its potential impact on children's outcomes is obviously of high policy importance.

The existing literature suggests that growing up in a jobless household can have adverse long-term effects (Ermisch et al. 2004). Living in a workless household has been found to be negatively associated with later academic and occupational attainment (McLanahan & Sandefur, 1994; Haveman & Wolfe, 1994; Cherlin et al. 1995; Kiernean, 1997) and persistent dependence on social security benefits (Gottschalk, 1996; Iacovou & Berthoud, 2000; Such & Walker, 2002). Children

growing up in poor or workless households are more likely to be workless or poor themselves as adults, as compared to children who grow up in households where someone is in work (Gregg, Harkness & Machin, 1999; Such & Walker, 2002). Likewise evidence on the experiences of children growing up in workless households across Europe suggests that parents' labour market status strongly predicts children's economic well-being, and that children living in households with no employed adults are particularly vulnerable to the experience of income poverty (Harkonen, 2011). With rising unemployment rates there is now increasing concern about generations of families who have never worked (Beaulieu, Duclos, Fortin, & Rouleau, 2005; Coelli, Green, & Warburton, 2007; Ermisch, Francesconi, & Pevalin, 2004; Gregg & Wadsworth, 2001; Gregg & Wadsworth, 2008; Harkonen, 2011; Nickell, 2004; Pemberton, 2008; Platt, 2010; Scutella & Wooden, 2008) and about the potential scarring effects of household worklessness on the future labour market experiences of the children of today (Macmillan, 2010).

The evidence base on the specific issue of inter-generational transmission of worklessness in the UK is limited however (see Macmillan (2010) for a review). Using the 1958 National Child Development Study (NCDS), O'Neill and Sweetman (1998) showed a strong relationship between a father being unemployed and the probability that his son will become unemployed. A previous study by Johnson and Reed (1996), also using the NCDS, found that 19% of sons who experienced a year or more out of work between the ages 23-33 had had a father out of work at age 16, compared to the sample average of 10%. Macmillan (2010) examined the magnitude of the intergenerational correlation of worklessness using the 1958 National Child Development Study (NCDS) and the 1970 British Cohort Study (BCS) and found sons were over twice as likely to experience workless spells themselves if they came from a family where the father experienced worklessness during their childhood. The intergenerational correlation in worklessness appears to have increased for the later born cohort: the correlation is 5 percentage points higher in BCS than in NCDS. The relationship remained strong, even after controlling for a range of family background characteristics, though it was not possible for the authors to establish a causal relationship.

There is less evidence on the *processes* that link parental worklessness to children's and young people's outcomes and the motivation for this research is therefore

1. the need to obtain evidence on current cohorts of young people; and

2. the need to assess *how* parental worklessness might influence children's outcomes, and in particular influence a young person's likelihood of ending up Not in Education, Employment or Training (NEET) themselves.

There is also some existing evidence that the risks for children's development from living in a workless household tend to be higher when they are younger and tends to decline with age (Duncan, Brooks-Gunn, Yeung, & Smith, 1998; Ermisch, et al., 2004). This prompted us to assess the impact of parental worklessness in the primary school years, as well as in adolescence. To consider the different channels through which worklessness might operate, we investigated the associations between household worklessness and a wide range of children's outcomes, including their academic attainment and cognitive and non-cognitive outcomes (e.g. GCSE scores, behaviour adjustment, aspirations and engagement with school, criminal activities, drug taking etc.).

1.2 *What is new?*

Our contribution to the literature is fivefold:

- we investigate the experiences of young children (age 7) as well as young people (at Key Stage 4 (KS4))
- we use very rich and current English data enabling us to assess parental worklessness as well as a number of interlinked risk factors
- we use longitudinal data to take into account the duration of worklessness
- we investigate a wider range of outcomes than hitherto has been possible
- we examine potential protective factors enabling children to 'beat the odds' and overcome disadvantage.

Specifically this study adds:

1. evidence from current UK age cohorts, i.e. the Millennium Cohort Study and the Longitudinal Study of Young People in England born in 1989/90;
2. evidence on the role of multiple, interlinked risk factors (such as socio-demographic factors, family structure, health, and area deprivation). We provide an assessment of
 - a. the associations between parental worklessness and these interlinked risks, and
 - b. the effect of parental worklessness over and above these interlinked risks;

3. evidence that takes into account the duration of worklessness. Most previous studies have conceptualised worklessness as a state, without taking into account that households may be moving in and out of worklessness over time;
4. evidence that takes account of the timing of worklessness by
 - a. assessing associations between parental worklessness and academic attainment and behaviour in primary school (age 7),
 - b. assessing effects of parental worklessness on aspirations, academic attainment, behaviour and employment outcomes of young people (age 15-18/9 years);
5. evidence on the potential role of protective factors that enable children and young people to function effectively even in the face of parental worklessness (controlling for the additional interlinked risk factors mentioned above and described in more detail in the next section).

Multiple interlinked risks

There is a concern that the apparent impact of parental worklessness might be spurious, due to its association with a number of other problem factors faced by families (Ermisch et al., 2004), including family socio-demographic characteristics, family structure, housing conditions, and area deprivation (Haveman & Wolfe, 1994; Iacovou & Berthoud, 2000; McLanahan, 1997, 2004). It is therefore important to control for these factors. For example, parental worklessness is increasingly concentrated in certain subgroups of the population and in certain areas (Gregg & Wadsworth, 2001). Workless households are significantly more likely to experience poverty than households in which at least one adult is in work (ONS, 2011). Indeed, comparing poverty rates of children of jobless couples in Europe, Harkonen (2011) found that in the UK and Ireland these were higher than the average in other countries, reaching above 50%. Hence it is important to allow for these other linked risk factors when modelling the relationship between parental worklessness and outcomes. Certainly the existing evidence suggests that the relationship between any single risk factor and subsequent outcomes tends to be weak. Usually many risks are involved in determining an outcome, and serious risk emanates from the accumulation of risk factors (Garmezy, 1991; Rutter, 1981, 2009). In our analysis we therefore took account of income poverty and a number of other potentially interlinked risk factors (such as family demographics, family structure, parental health, housing conditions, and area deprivation) that might explain the association between parental worklessness and child outcomes.

Our choice of inter-linked risk factors was driven by existing research evidence. For example, ONS statistics show that worklessness varies by region. Inner London has the highest proportion of children living in workless households of all UK regions at 26.5 per cent, compared with the South East at 10.7 per cent⁴. Single adult households are also far more likely to be workless than households with two adults, both with and without children. For example 40.4 per cent of lone parent households are workless compared to 5.3 per cent of couple parent households⁵. Furthermore, disability strongly affects work rates (2010 Joseph Rowntree report). In our analysis we therefore allowed for the effect of region, being a single parent, disability and a range of other inter-linked risk factors discussed below.

Timing and duration of risk effects

Most previous studies have conceptualised worklessness as a state, without taking into account that households may be moving in and out of worklessness over time. In our analysis we therefore differentiated between families that never experienced worklessness during the period of observation, those who moved in and out of worklessness, and those that were persistently workless at several (at least three) subsequent years of observation.

In addition to duration effects, we aimed to gain a better understanding of the role of timing of risk effects. Although the experience of a workless household might have negative consequences at any age, the existing literature has generally found that the risks for children's development from living in a workless household tend to be higher when they are younger and tend to decline with age (Duncan, et al., 1998; Ermisch, et al., 2004). For example, risk experiences in early childhood can set up a vicious cycle of cumulating disadvantage (Clarke & Clarke, 1976; Rutter, 1998). We therefore investigated the experiences of young children (age 7) as well as young people (age 15 at KS4), to explore whether parental worklessness had differing impacts across the age range.

⁴ Workless households for areas across the UK in 2010, <http://www.ons.gov.uk/ons/publications/re-reference-tables.html?edition=tcn:77-223100>, Table C.

⁵ Workless working-age households by type of household, 2010 Release <http://www.ons.gov.uk/ons/publications/re-reference-tables.html?edition=tcn%3A77-200008>

Risk and protection

Not all children respond in the same way to risk exposure (Rutter, 1979, 1990). We therefore examined the role of potential protective factors that can enable the child or young person to function effectively, even in the face of significant adversity, i.e. parental worklessness and exposure to other additional risks.

It is assumed that some children have a distinct advantage over other children, by coming from families experiencing more favourable conditions (see also Becker & Tomes, 1986), such as facing fewer risk factors, more involved parenting, and parental support for education. Characteristics and attributes of the parents are passed on to their children through parental behaviour, attitudes, and preferences. In addition the children themselves might show distinct characteristics enabling them to withstand the negative effects of parental worklessness and associated risks (Werner & Smith, 1992). Furthermore, characteristics of the school and school experiences can play a vital role in supporting children growing up in socio-economic disadvantage (Crosnoe & Cooper, 2010; Crosnoe & Huston, 2007; Leader & Stern, 2008; Masten & Coatsworth, 1998).

The process of avoiding adverse outcomes or doing better than expected when confronted with major adversities is conceptualised within the concept of resilience (Luthar, Cicchetti, & Becker, 2000; Masten, 2007; Rutter, 2006). Although individuals may manifest resilience in their behaviour and life patterns, resilience is not a personality characteristic. Resilience is not only dependent on characteristics of the individual but is greatly influenced by the wider social context. Resilience is defined by the constellations of risk exposure and the manifestation of effective functioning in the face of that risk. Pioneering studies following the lives of people thought to be at risk of unfavourable outcomes, such as children growing up with mentally ill parents, and those who have been abused, neglected, or exposed to poverty and socio-economic disadvantage, observed great variations in functioning, including cases of positive adaptation despite the experience of even severe adversity (Anthony and Cohler, 1987; Garmezy, 1974; Rutter, 1979; Werner & Smith, 1982). Trying to understand the processes and mechanisms that enable individuals to beat the odds, to succeed in the face of adversity, led to a change of focus from deficits to the possible assets and resources within individuals and communities adversity (Antonovsky, 1979; Cicchetti & Garmezy, 1993).

In this study we controlled of a number of potential resource factors that can counterbalance or neutralize the negative effects associated with risk exposure

(Lerner & Benson, 2003; Masten, 2007). Resource factors that we considered included characteristics of the individual (gender, health status), positive school experiences (school engagement, friends at school, positive aspirations for the future), warm and engaged parenting and parental support for education (attending parents evenings, parental satisfaction with school), school characteristics (% of pupils receiving free school meals; % pupils with a statement of special educational need), as well as interactions with peers and teachers, and use of services (i.e. Connexions advisor, career advisory).

In summary, in our modelling we examined both the risk effects of exposure to parental worklessness and associated interlinked risk factors, as well as potential protective factors enabling young people to thrive and succeed, even in the face of worklessness and other adversity.

1.3 1.3 Approach to the analysis

The data has been analysed using descriptive statistics and regression models. The analytical approach adopted in this study proceeded as follows:

1. we assessed the degree of parental worklessness and how it related to a number of other socio-economic **interlinked risk** factors, such as family socio-demographics, family structure, housing conditions, parental health and area deprivation;
2. we assessed the direct (or bivariate) association between parental worklessness and various child outcomes. This was done to establish whether there was an association or not;
3. we then controlled for the interlinked risk factors discussed in point 1 above to take into account the role of potential confounding factors;
4. lastly, we controlled for potential **protective factors** to assess whether they further reduced the association between parental worklessness and child outcomes, after we had taken into account the interlinked risk factors.

Proceeding via these four steps enabled us to:

1. assess the extent of parental worklessness in families with dependent children and examine how parental worklessness related to other risk factors;
2. assess the strength of the association between parental worklessness and the different child outcomes;

3. assess whether this association was largely due to the interlinked risk factors (i.e. household demographics, family structure, income poverty, housing conditions, parental health and area deprivation);
4. gain a better understanding of potential protective factors.

In addition, based on the theory of risk and resilience outlined earlier, we explored the mechanisms through which parental worklessness affected children's outcomes. We allowed for interlinked risk factors and child characteristics (i-ii) and protective factors (iii-vi):

- i. cumulative risk processes (taking into account the multiple interlinked risks associated with worklessness);
- ii. child characteristics (child gender, age, biological factors, ethnicity);
- iii. warm and engaged parenting behaviour (parent-child interactions);
- iv. parental engagement and support for school related activities (parental aspirations for the child, parental contact with school, parents attend school events)';
- v. the child's school experiences (school engagement and attitude to school)
- vi. school characteristics (socio-economic characteristics of the school).

2 The Data

We drew on data collected for the Millennium Cohort Study (MCS) and the Longitudinal Study of Young People in England (LSYPE).

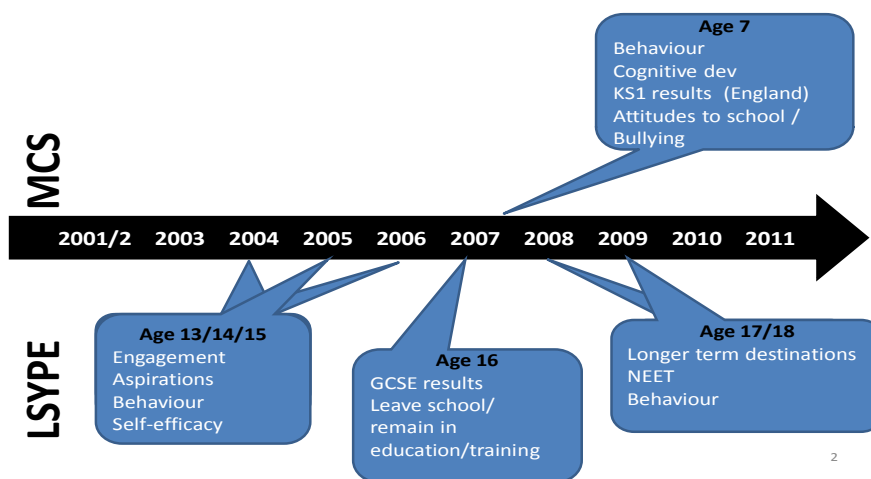
The *Millennium Cohort Study (MCS)* is an ongoing survey of 18,818 babies born between September 2000 and January 2002 into 18552 families living in the UK. Data collections took place at ages 9 months, 3, 5, and 7 years. Data are currently being collected for 11 years olds and a future survey is planned to take place at age 14, in 2014. Data have been collected from parents, children, teachers and health visitors, comprising personal interviews and self-completion questionnaires. The data include information on socio-demographic family characteristics, children's cognitive, social, emotional and behavioural development, gender roles, health and well-being (Plewis, Calderwood, Hawkes, Hughes, & Joshi, 2004; Shepherd, Smith, Joshi, & Dex, 2004). In this research the MCS data were used to examine the experiences of parental worklessness in families with young children (age 0-7). In particular we focused on outcomes for 7-year olds (Key-stage 1 attainment, cognitive ability, behavior adjustment, and child wellbeing) to capture the impact of parental worklessness on children in primary school. A more detailed description of the different measures used is given in the MCS Technical Report.

The *Longitudinal Study of Young People in England (LSYPE)* is a panel study of about 15,000 young people born in 1989/90. Data collection for LSYPE started in 2004, at age 13 with annual follow up interviews collecting data from different sources, including information from the young

people and their parents. LSYPE data have been linked to administrative education databases, such as the National Pupil Database and Individual Learner Record, to provide a record of the young person's education achievement. In this research the data were used to examine experiences of parental worklessness in families with young people from age 13 to 19 years, covering the crucial transition from school to work. In addition, the timing of the data collection for LSYPE enabled us to examine the transition for a cohort that grew up during a long period of economic growth in England but that entered young adulthood in the midst of an economic recession, which began in the spring of 2008, with rising employment rates for 18 to 24 year olds (Office for National Statistics, 2010). (A more detailed description of the different measures used is given in the LSYPE Technical Report.)

Figure 1 gives an overview and timeline of the outcome measures from both data sets that were used in the analysis.

Figure 1: Data sources and time line



2.1 Defining parental worklessness

Worklessness is defined at the household level (not the individual level). Analyses using individual level data on unemployment rather than household data on worklessness have reached very different conclusions, even when using the same sources of information (Gregg & Wadsworth, 2001). This is because worklessness in Britain is not equally distributed across households, and because worklessness can be caused either by a person being inactive (no longer seeking work) or unemployed.

A workless family was defined in our data as a family where no parent living in the household was in work at the time the family was interviewed. We only considered whether or not the parents in the household were working. There may have been other individuals in the household in work, such as grandparents or older siblings.

Our definition of a workless household included:

- 2-parent families where both parents were not in work, and
- single parent families where the parent was not in work.

Information on parental employment status was collected in MCS at four time points between 2001 and 2008 (collected during 2001/2, 2003/4, 2005/6 and 2007/8) and in LSYPE annual collections were made between 2004 and 2008.

In both samples we found that about 12-15% of children and young people lived in workless families at each of the different survey points. These findings correspond with evidence from the Labour Force Survey 2010.

To define persistent worklessness we used information on parental worklessness at all four assessment points in MCS. In LSYPE we used information on parental worklessness at the first three data collections, so that we could then predict academic attainment and aspirations of young people at age 16

Using the data longitudinally allowed us to identify families who were:

- never workless at any of the three (LSYPE) or four (MCS) assessment points (*continuously working*)
- those who moved in and out of worklessness (*temporary worklessness*)
- and those who were workless over the three (LSYPE) or four (MCS) timepoints (*persistent worklessness*).

It cannot be assumed that the families that were identified as persistent workless were indeed workless throughout the whole period under consideration as the families were not observed continuously and there might have been some fluctuation in family and household circumstances. The discussion of persistent worklessness is therefore subject to this caveat.

The prevalence of parental worklessness in each of the age cohorts of children and young people are described below. However to gain a better understanding of family worklessness across the two studies, Table 1 shows the prevalence of parental worklessness over 4 surveys in both studies and over 3 surveys in LSYPE (by necessity we use just three observation points in some of our LSYPE analyses so the final column is included for completeness).

Table 1: Prevalence of parental worklessness

	MCS (4 timepoints: when child aged 9 months, 3, 5, and 7 years) %	LSYPE (4 timepoints: when young person aged 13-16) %	LSYPE (3 timepoints: when young person aged 13-15) %
In work at all times	73	81	82
Workless at one timepoint	9	4	4
Workless at two timepoints	6	2	3
Workless at three timepoints	6	2	11
Workless at four timepoints	7	10	N/A
Total N	11,647	9,857	12,437

In MCS we found that 73% of families never experienced worklessness over four time points, compared with 81% in LSYPE. Persistent worklessness was observed for 7% of families in MCS and 10% in LSYPE. Thus while in both studies about one in 10 children or young people lived in families where parents were persistently workless, we found a higher prevalence of temporary worklessness, i.e. moving in and out of employment, among parents of younger children (20% in MCS) than among parents with older children (7-8% in LSYPE). The higher incidence of worklessness in MCS data may arise due to the greater difficulties parents encounter when combining work with looking after younger children, particularly single parents. Equally however, the time frame considered in the LSYPE is shorter than in the MCS, thereby giving greater opportunity to be classed as persistently workless in the former data set.

2.2 Interlinked Risk Factors

As discussed, we took account of a number of additional risk factors that have been shown to be associated with parental worklessness. In particular we allowed for the independent role of family socio-economic background, family structure, income, poverty, parental health, housing, and area deprivation. We also took account of parental education level. For this we combined the education levels of both parents into one measure to indicate whether a child

was living in a household with parents who had no or minimal qualifications. We also took into account changes in circumstances during the observation window, such as changes in family composition or acquisition of additional qualifications (as an indicator of lifelong learning). The precise measures used in each data set are discussed in section 4 (MCS) and 5 (LSYPE) below. Table 2 gives an overview of the pattern of interlinked risks in the two studies. Please note that in MCS persistent parental worklessness was assessed over 4 surveys, spanning ages 9 months to 7 years (2000-2007), while in LSYPE persistent parental worklessness was assessed over a shorter period, spanning a period of 3 subsequent years: 2004-2006 (ages 13 to 16).

Table 2: Prevalence of interlinked risk factors %

	MCS		LSYPE	
	Always working	Persistent workless	Always working	Persistent workless
Single parent household at wavetime point 1	2.9	58.3	16.4	67.3
1+ change in family marital status since time point1	22.3	35.0	0.6	1.0
No qualifications at time point1	2.7	41.1	8.0	49.4
Gained more qualifications by time point 3	15.7	16.3	5.6	1.5
English not first language	9.7	17.9	4.3	17.1
Teenage mother at birth of child	1.2	16.9	4.6	12.3
Older mother at birth of child (35+)	20.1	11.4	10.5	13.0
Social (LA/HA) housing	10.7	75.0	11.5	71.3
Family income < 60% of median household income	11.6	81.5	- ^a	- ^a
Family income < £10,400	2.7	26.0	6.7	43.8
Long-term limiting illness of parent	25.6	51.7	18.4	56.2
Poor general health of parent	1.8	7.2	1.6	12.1
4+ children in family	9.1	30.3	8.4	24.4
Summary risk score				
4+ risks faced by family	2.8	46.8	7.2	79.6

Note: the observation period for MCS is 4 years whilst the observation period for LSYPE is 3 years.

^a In LSYPE data family income is provided in banded form and hence it is not possible to calculate the proportion of respondents living in households at <60% below median household income.

We found parental worklessness to be related to a number of interlinked risk factors, such as mother's age, lack of parents' qualifications, being a single parent, ethnic minority status, living in social housing, family instability following divorce, separation or new partnership, and parents having a long-term limiting illness. In MCS the majority (82%) of persistently workless families lived in poverty, 75% lived in social housing, 58% were single parent families, 52% had a parent with a long-term limiting illness, and 41% had no parental qualifications. Although the table above shows data for those always working

and those persistently workless, note that even families that experienced worklessness only once during the period had additional risk factors, such as younger maternal age, low qualifications, social housing, and relationship break-up (see MCS Technical Report for multivariate regression results).

In LSYPE parental worklessness was associated (in multivariate regression) with the following:

- being a single parent;
- being a teenage mother;
- having a long-term limiting illness
- having lower levels of academic qualifications
- having at least one parent not having English as a first language
- living in rented, particularly social-rented, accommodation
- not gaining a qualification during the period;
- having low income
- larger families, that is families with more children
- living in a deprived area; and
- living in areas with higher unemployment.

These factors were also more likely to be found among persistently rather than temporary workless families (see LSYPE Technical Report). Nearly four in five persistently workless families in LSYPE had four or more of the linked risks we identified in this research. Temporary workless families on the other hand were more likely than persistently workless families to have experienced a marital change (either separation or partnering). This transition alone may well have a marked impact on the family, even more so when it coincides with an event such as unemployment or finding work (by definition temporary workless families would have had an employment event during the period too).

3 Evidence from the Millennium Cohort

The Millennium Cohort (MCS) was used to explore the association between parental worklessness and child outcomes, focusing on a range of outcomes at age 7. The specific outcomes considered are discussed below (a more detailed description of the measures is given in the MCS Technical Report)

- *Key Stage 1 attainment tests (taken in year 2, age 7).* Tests taken at school, and teacher assessments, in reading, writing, maths and science.
- *Cognitive ability tests (administered in the home age 7).* At age 7 each child was directly assessed by specially trained interviewers using two subscales (word reading and pattern construction) of a well known

cognitive ability test, namely the British Ability Scales Second Edition (BAS II). The two subscales capture core aspects of verbal and nonverbal abilities (Elliott, 1996; Hill, 2005).

- *Measures of behaviour (administered in the home age 7).* Children's behavioural adjustment at age 7 years was measured using the widely used Strength and Difficulties Questionnaire (SDQ). The SDQ is a behavioural screening questionnaire for 3 to 16 years olds. It consists of 25 items, assessed via parental or teacher report, and has shown to be reliable and valid (Goodman & Goodman, 2009). A higher score on the SDQ indicates that a child has more behavioural problems.
- *Child well being.* Child well being was assessed by responses to questions about whether the child had been bullied by other children ('How often do other children bully you?'), whether the child bullied other children ('How often are you horrible to other children at school?'), and whether the child was happy in the school environment ('How often are you unhappy at school?').

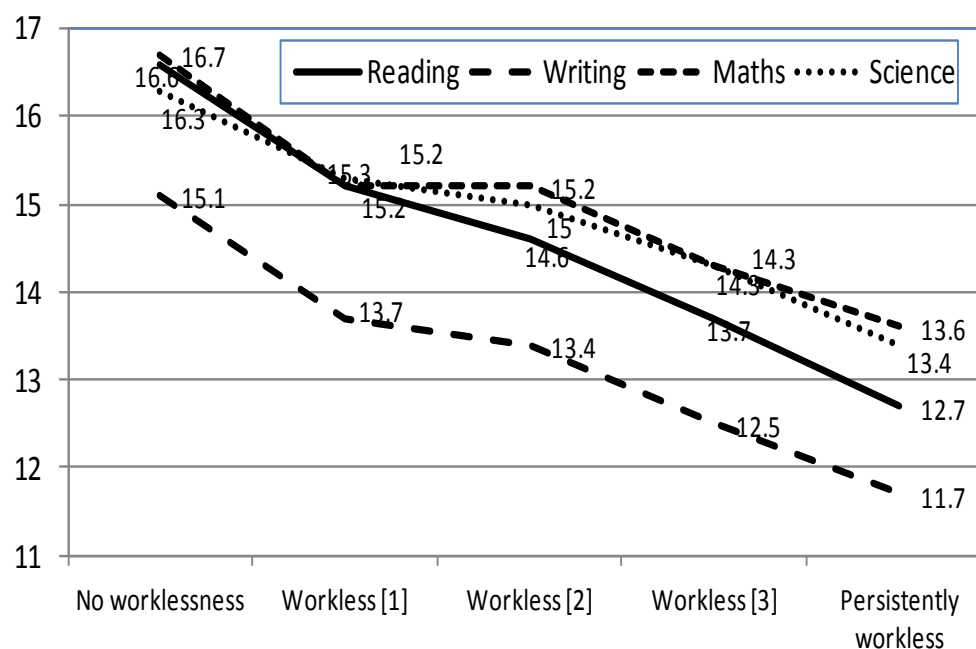
3.1 Bivariate associations

We first considered the relationship between parental worklessness and each outcome, not taking any other factors into account (the bivariate relationship).

Parental worklessness was negatively associated with all of the developmental outcomes of children at age 7 mentioned above. In other words, repeated worklessness was a significant risk factor associated with poorer academic attainment, cognitive ability, and behavioural adjustment of young children (age 7).

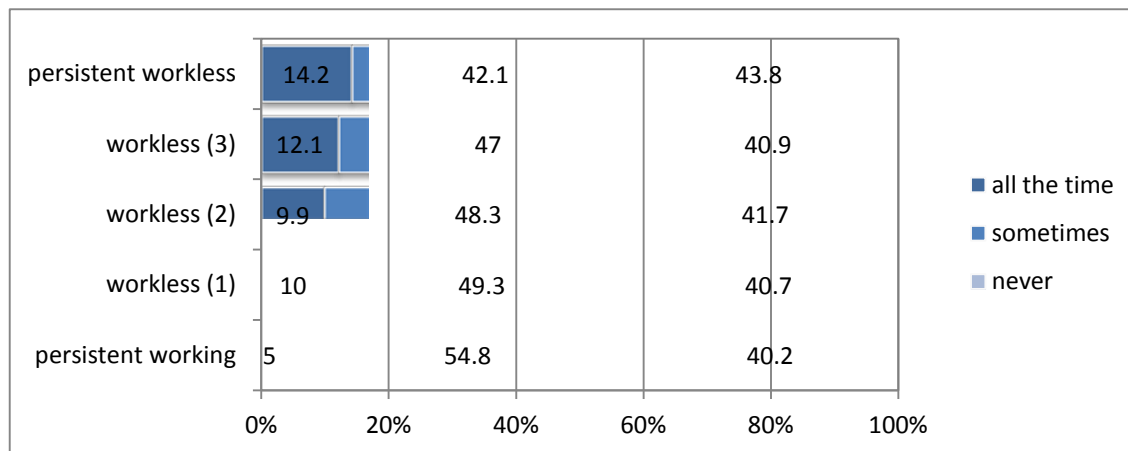
For example, Figure 2 shows the average KS1 point scores in the four subjects for MCS children by family work status. Exposure to repeated parental worklessness was associated with lower academic attainment across all four tests, although writing ability was most strongly associated with worklessness. Interestingly, the experience of worklessness at only one of the four assessment points was already associated with a significant drop in attainment.

Figure 2: Average KS1 point scores in the four subjects for MCS children by family workless status



Children growing up with parents who experienced worklessness also showed lower levels of achievement in the pattern construction and word reading tests (as measured by the British Ability Scales) by age 5. The differences were especially stark for verbal skills, i.e. word reading, and less strong for non-verbal skills, i.e. pattern construction. Parents who experienced worklessness, particularly repeated worklessness, also reported more behaviour problems of their children than parents who were continuously in work. Likewise teachers reported more behaviour problems among children who grew up in workless families than for children who had working parents. Reported hyperactivity was most strongly associated with parental worklessness. Graphs of the bivariate relationships between worklessness and these other outcome measures are shown in the MCS Technical Report.

We also examined the relationship between parental worklessness and children's wellbeing, characterised by their happiness in school, whether they were being bullied, or whether they bullied other children. Children growing up in repeated and persistent workless households were more likely to be bullied and to bully other children, and to feel unhappy all of the time at school than children with working parents (see Figure 3). However, they were also slightly more likely to report never feeling unhappy at school.

Figure 3. 'How often do you feel unhappy at school?'

Data: Millennium Cohort Study.

3.2 Controlling for interlinked risks and potential protective factors: multivariate associations

Worklessness is associated with other interlinked risk factors, as discussed earlier. Hence when trying to understand the relationship between worklessness and child outcomes we needed to control for these inter-linked risk factors. We therefore estimated multivariate regression models that could enable us to simultaneously take account of the relationship between worklessness and any given outcome, whilst allowing for other factors that also influence the outcome in question.

We found that when we allowed for the influence of the interlinked risk factors in our regression models, much of the association between parental worklessness and the outcomes was reduced. Thus the apparent strong link between worklessness and the outcomes described in section 4.1 was largely attributable to other characteristics of the family (the linked risk factors). Nonetheless, persistent parental worklessness had an independent risk effect on these cognitive and behavioural outcomes which was not fully accounted for by family or household characteristics. For the indicators of child wellbeing however (feeling happy at school, being bullied and bullying other children, the linked risk factors fully explained the associations with parental worklessness, which were no longer significant after controlling for the linked risk factors.

In a next step we controlled for potential protective factors to assess whether they further reduced the association between parental worklessness and child outcomes – after taking into account the interlinked risk factors. If the

protective factors show an independent effect, over and above the role of interlinked risk factors, they might identify potential targets for interventions to support young children and their parents to overcome the effect of worklessness. Box 1 lists the protective factors used in the analysis, comprising child characteristics, parenting approaches, parental engagement in their child's education and school characteristics and experiences.

Box 1: Protective factors used in the modelling of child outcomes (MCS)

<p><u>Child Characteristics</u></p> <p>Gender Age at assessment (in months) Prematurity Birthweight Ethnicity (white versus other)</p> <p><u>School Experiences at age 7</u></p> <p>Likes school Tries to do best at school Has friends at school Likes playing with friends at school</p> <p><u>School Characteristics at age 7</u></p> <p>% of pupils in school with SEN % of pupils in school receiving FSM Average KS1 scores</p>	<p><u>Parenting at age 3 and age 5</u></p> <p>Warm parent-child relationship (Pianta)⁶ Number of activities done together as a family Parent reading to child Visits library Has a regular bedtime Disorganised home</p> <p><u>Parent engagement with school at age 7</u></p> <p>Parent satisfied with school Parents has post16/university aspirations for child Attended parents evening</p>
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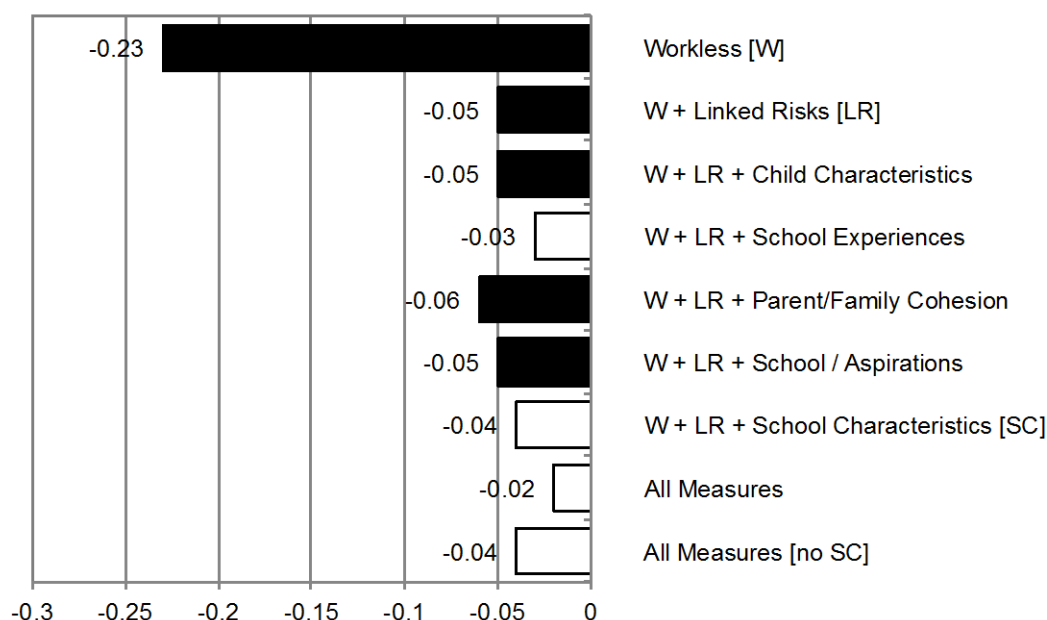
Families experiencing persistent worklessness tended to have fewer protective factors (see MCS technical report). Although the majority of children liked school and tried to do their best, had many friends and liked to play with them, children in workless households enjoyed school less than those not exposed to parental worklessness. Most parents reported a warm and engaged relationship with their child, and there were no great differences between working and non-working parents. Workless parents were however less likely to read to their child on a daily basis, or to take their child to the library, especially persistently workless parents. Workless parents were more likely to report that their home was disorganised and that they did not observe regular

⁶ *Parent-child relationship* at age 3 years was assessed using maternal reports the Pianta scale (Pianta, 1992), comprising 15 items on a 5-point Likert scale (I share an affectionate, warm relationship with my child; dealing with my child drains my energy). Responses were summed, with a high score indicating a better parent-child relationship.

bedtimes for their child. Regarding their engagement with school, most parents, whether workless or not, were satisfied with the school their child attended and most parents had high academic aspirations for their child. 88% of persistently workless parents wanted their child to go to university, as did 91% of persistently working parents. Persistently workless parents were however less likely to attend parents evenings than persistently working parents (89 versus 97%).

To illustrate our analytic approach, Figure 4 shows the regression coefficients from models of the relationship between persistent parental worklessness and key stage 1 results in writing. Greater values of the coefficient and larger bars indicate a stronger association between worklessness and the outcome. If a bar is in colour it is because the relationship is statistically significant. The results for the other outcomes are given in the MCS Technical Report.

Figure 4. Predicting KS1 writing scores (standardised Beta coefficients from the multiple regression models)



Note: White bars indicates a non-significant relationship

In Figure 4 the first bar shows the association between persistent parental worklessness (compared to parents being persistently in work) and key stage 1 (KS1) writing scores. The next bar shows the association between parental worklessness and KS1 writing scores, after controlling for the linked risk factors. We see that the bar is smaller, which indicates that the relationship

between parental worklessness and KS1 writing is largely explained by these other risk factors. Parental worklessness does retain a significant negative association with the outcome measure though, indicating that it had an independent effect, even after controlling for the linked risk factors. The remaining bars show the association between parental worklessness and key stage 1 writing scores when the model includes the various sets of protective factors (listed in Box 1) as well as the linked risks. We ran these models to see whether the relationship between parental worklessness and the outcome variable was further reduced by including particular protective factors in the model, again after controlling for the linked risk factors. Although we can see that some of the protective factors, i.e. school experiences and school characteristics reduced or even eliminated the association between parental worklessness and the outcome, the greatest reduction in the apparent effect of worklessness was observed after adding the interlinked risk factors. Nonetheless the protective factors played an independent role in reducing or even removing the association between worklessness and the child outcomes. In particular positive school experiences and school characteristics appeared to play a role in supporting the attainment of young children (age 7) exposed to worklessness.

We applied the above approach to models of other outcomes, as discussed earlier. For some outcomes, namely indicators of child wellbeing, the association between parental worklessness and the outcomes was fully explained by the linked risk factors. For other outcomes inclusion of the linked risks did not eliminate the relationship. Inclusion of the protective factors however, did eliminate the association between parental worklessness and some outcomes. This was true for British Ability Scale word reading scores and parental rating of behaviour adjustment. However, for the other cognitive and behavioural outcomes (KS1 reading, mathematics, science, BAS pattern construction, and teacher rating of behaviour adjustment) the protective factors reduced but did not eliminate the statistically significant relationship between parental worklessness and the outcome.

3.3 Summary

In summary, findings from the Millennium Cohort Study provide evidence of an early negative relationship between parental worklessness and children's cognitive and behavioural development, specifically KS1 reading, mathematics and science, BAS pattern construction and teacher rating of behaviour. Much (but not all) of this association was attributable to other characteristics of the family, such as socio-demographic factors and parental health, highlighting the multiple challenges faced by workless families. We find some evidence

regarding the role of potential protective factors in further reducing the association between parental worklessness and child outcomes, although the effects were relatively small after controlling for the linked risk factors.

4 Evidence from the Longitudinal Study of Young People (LSYPE)

The LSYPE was used to explore the relationship between parental worklessness and a range of outcomes for young people in adolescence (age 13-18). Box 2 shows the full range of outcomes that we were able to consider in our analysis.

Box 2: LSYPE Outcomes

Education aspirations and outcomes:

- Negative attitude to school (age 15)
- Not at all likely to go to university (age 15)
- Not achieved 5+ GCSEs A*-C (age 15)
- Total GCSE and equivalent point score (age 15):

Employment outcomes:

- Not in Education Employment Training (NEET) in May 2009 (age 18)
- Months NEET from September 2006 to May 2009 (age 15 – 18)

Psycho-social outcomes:

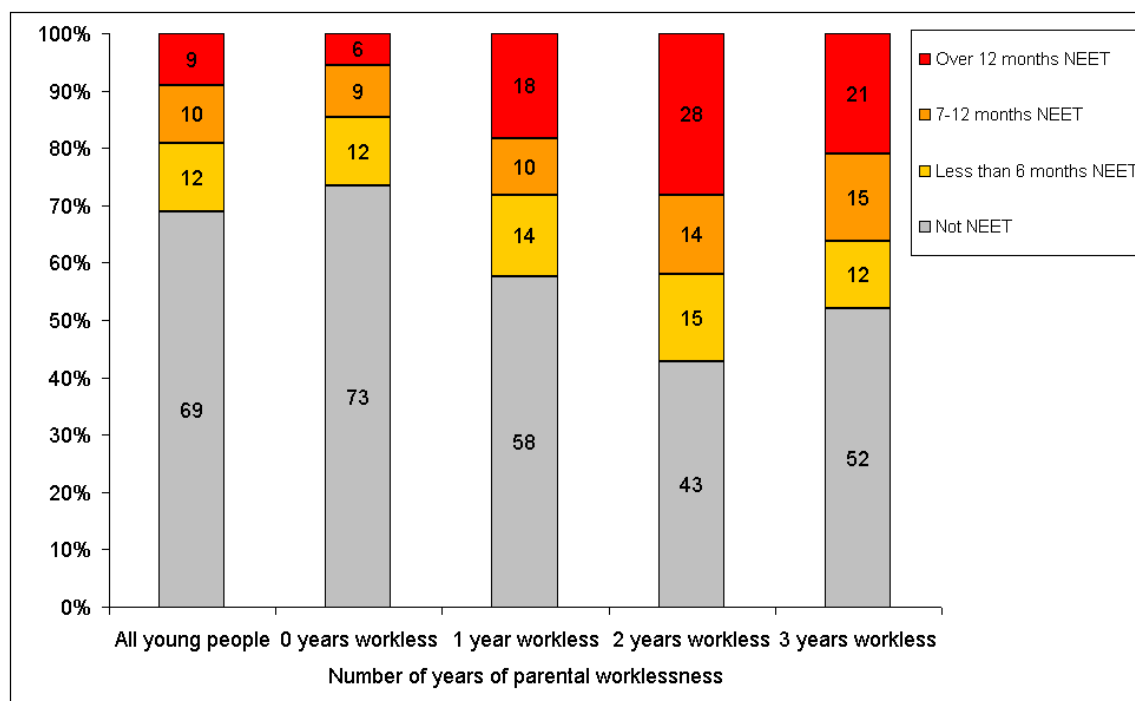
- Feelings of lack of control (age 15)
- Been bullied in past year (age 15)
- Taken part in two or more criminal activities in past year: graffiti, fighting, shoplifting, vandalism (age 15)
- Mental health problems as scored 4+ in General Health Questionnaire (age 16)
- Drinks alcohol on most days (age 16)
- Taken drugs in past 4 weeks (age 18)
- Teenage parent and living with own children (age 18)

4.1 Bivariate associations

We first considered the relationship between parental worklessness and each outcome, not taking any other factors into account (the bivariate relationship). Parental worklessness was significantly associated with a range of outcomes for young people in adolescence. Young people from workless families were less likely to apply for university, to think that they don't have much chance in life, achieved lower GCSE grades, were more likely to be a teenage parent, and were

more likely to be NEET and to be NEET for longer than those with working parents. Parental worklessness was particularly strongly associated with young people's academic success (total GCSE scores, getting 5 A*-C GCSEs, applying to university) and their labour market outcomes (being NEET at age 18 and months spent NEET from age 15-18). To illustrate, Figure 5 shows the association between parental worklessness and the months a young person spent NEET between ages 15 to 18 years.

Figure 5 Months young person has been NEET by parent work status



Notes: Source LSYPE data from age 15 to 18 (time points 3-6).

Full descriptive statistics of the association between parental worklessness and the other outcomes considered can be found in the LSYPE Technical Report.

On the other hand, we found that most young people had a positive attitude to school and did not drink alcohol on most days, regardless of their parental work status. There was also no significant association between parental worklessness and the mental health of young people. Moreover, young people growing up with persistently workless parents were actually less likely to take drugs than young people with working parents or parents who were temporarily workless.

We also found that temporary parental worklessness (in particular two years of worklessness) showed stronger negative associations with some outcomes (see

Figure 5 for an illustration). However, given the very small proportion of the sample that experienced temporary worklessness over the relatively short period under consideration in LSYPE, we do not place undue emphasis on this result.

4.2 Controlling for interlinked risks and potential protective factors: multivariate associations

Our bivariate analysis suggested a significant relationship between parental worklessness and a range of adolescent outcomes. However, as before, we needed to check whether these relationships arose because young people in workless households faced a range of other interlinked risks that impacted on their outcomes. We therefore estimated regression models that controlled for the interlinked risks discussed in section 2.2. When we controlled for the influence of these linked risk factors, much of the association between parental worklessness and the outcomes was reduced (although not eliminated). This was the case with young people's feelings of lack of control, attitudes towards school, their likelihood of applying to university and probability of achieving 5 GCSEs at A*-C grades. This indicates that the association between worklessness and these outcomes was largely attributable to other risk factors. However, the strong relationship between parental worklessness and the likelihood of a young person being NEET, the months they spent NEET and the average GCSE point score achieved remained statistically significant even after controlling for interlinked risk factors.

For some other outcomes, namely being bullied and becoming a teen parent, the association with parental worklessness was no longer statistically significant at the 5% level after controlling for the linked risk factors, suggesting that these associations were fully attributable to the linked risks.

We then controlled for a number of potential protective factors to assess whether these factors further reduced the association between parental worklessness and the outcomes (after taking into account the interlinked risks). Box 3 lists the potential protective factors examined in the analysis. The factors are listed under headings specifying potential protective processes through which parental worklessness is assumed to affect children's outcomes (i.e. young people's characteristics, school experiences, contact with teachers, peer characteristics, family cohesion and parenting, parental engagement with their child's education, use of services, school characteristics).

Box 3 Protective Factors used in the modelling of adolescent outcomes (LSYPE)

Young people's characteristics

- Birth order
- Gender
- Does not have a Special Educational Need
- Good physical health (does not have a health problem or illness)
- Good mental health (GHQ score of 3 or less)

Young people's school experiences

- Has not moved school over the period
- Post-16 plans to stay in education
- Not played truant over the period
- Has not been bullied over the period
- Has positive attitudes to school (12 item scale including 'I feel happy at school', 'I work as hard as I can', 'School is a waste of time for me' etc)

Young people's contact with teachers

- Talk about plans for future study with teachers as part of or outside of lesson

Young people's peers

- Post-16 plans to stay in education

Family cohesion and parenting

- How often family know where the young person is when going out in evening
- How well the young person gets on with mother (or father if single-father family)
- How often had a family meal in last 7 days
- How often spend evening together at home as a family

Parental engagement with education

- Attending parents' evenings
- Making sure young person does their homework
- Speaking to teachers
- Good relationship with school

Use of services

- Private lessons arranged for young person
- Speaks to a Connexions advisor
- Speaks to a careers advisor

School characteristics (administrative data)

- Low proportion of children on Free School Meals
- Low proportion of children with a SEN

Notes:

- Protective factors are measured at a time point previous to the outcomes listed in Box 2.
- Frequencies of all outcomes are presented in the LSYPE Technical Report.

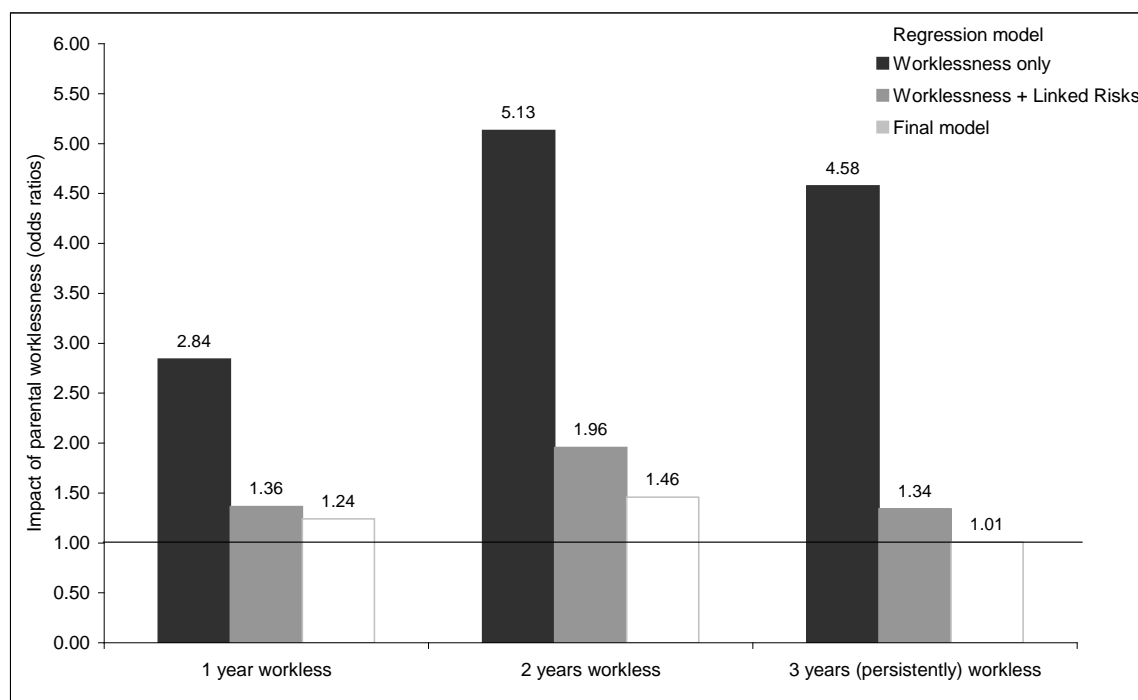
Controlling for these protective factors further reduced or eliminated the association between parental worklessness and the outcomes.

We illustrate these findings in Figure 6 which shows the results of a regression model of the likelihood of the young person achieving 5 GCSEs at A*-C. We found that the strong relationship between parental worklessness and the likelihood of gaining 5 A*-C GCSEs (shown by the first bar in each set) remained significant when the interlinked risks were taken into account (shown in the second bar in each set). However, once we controlled for all the linked risks *and* all the protective factors, the association between parental worklessness and this measure of academic attainment disappeared (shown in the third bar in each set). The association between parental worklessness and gaining 5 A*-C GCSEs only became statistically non significant in our final model (when all linked risks and protective factors were included) which made it difficult to isolate any particular protective process as being key. However, the following protective factors remained significant in the final model (after controlling for the interlinked risk factors) suggesting they have a potential protective role:

- Characteristics of the young person
 - not having special educational needs
 - not having long term health problems,
- Young person's experiences at school
 - not moving school
 - not playing truant
 - having a positive attitude towards school
 - wanting to stay on in education
- Parental engagement with education
 - parental academic aspirations for their child
 - talking to teachers and going to parent evenings
- Parenting
 - whether the parents know where the young person is when going out in the evening
 - making sure the young person does their homework
- School characteristics
 - school characteristics (low percentage of students with special educational needs and eligible for free school meals)
 - the number of friends who want to continue in full time education after year 11.

It is important to note however, that the interlinked risk factors had the strongest mitigating effect on the association between parental worklessness and academic attainment.

Figure 6 Association between parental worklessness and the likelihood of a young person not achieving 5 or more GCSEs grade A*-C



Notes:

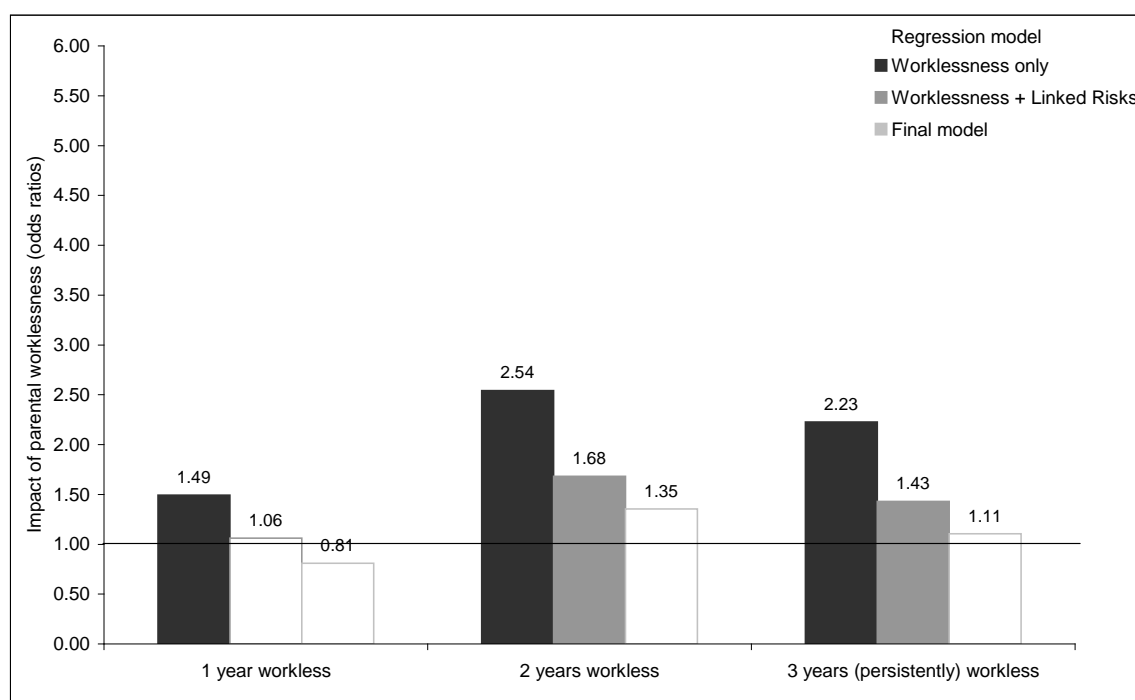
- The dependent variable is whether the young person got 5 or more GCSEs at grade A*-C or not
- Each bar represents the coefficient for the stated workless category. For example, the first set of three bars are the coefficients for the 1 year workless – the first bar is the coefficient when just parental worklessness is in the model, the second bar is the coefficient when linked risks are added to the model, and the third bar is the full model including linked risks and protective factors. Please see Box 3 for the full list of protective factors.
- Filled bar means workless category is significantly different from reference category. Empty bar means category is not significantly different from reference category. The reference category is 0 years workless (persistently working)
- See LSYPE Technical Report for full details.

In the case of education aspirations (Figure 7) we see that the association between parental worklessness was not as strong as for academic attainment at age 16, and the association between parental worklessness and education aspirations became statistically insignificant once we controlled for all the protective factors (final model). As for academic attainment we found a number of protective factors that remained significantly associated with education aspirations, even after controlling for interlinked risk factors (see LSYPE Technical Report). These factors were the same as listed above for Figure 6.

Again it was the interlinked risk factors that had the strongest role in explaining the association between parental worklessness and education aspirations.

Furthermore, young people whose parents experienced two and three years of worklessness had an increased risk of not applying to university - even when a range of linked risks were taken into account. This relationship was no longer significant when the protective factors were included in the model, highlighting in particular the role of parental engagement in their children's education, high academic aspirations among peers, and the young person's own academic aspirations as potential protective factors (see LSYPE Technical Report).

Figure 7 Association between parental worklessness and the probability that a young person says they are unlikely to apply to university



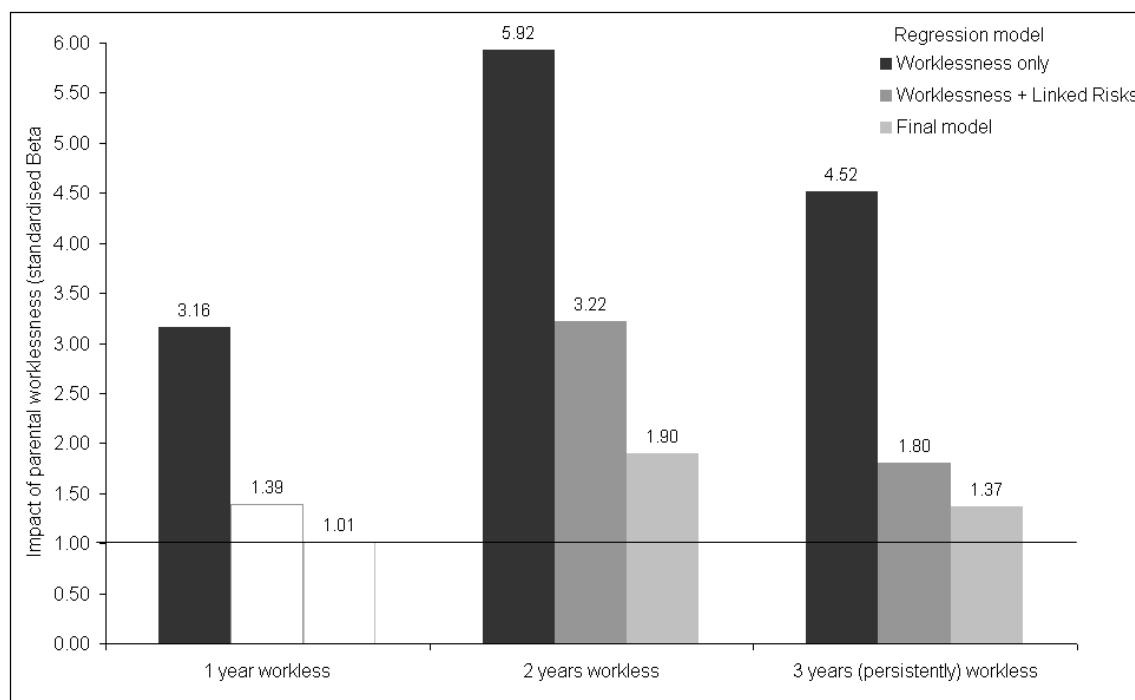
Notes:

- The dependent variable is whether the young person says they are unlikely to apply to university
- Each bar represents the coefficient for the stated workless category. For example, the first set of three bars are the coefficients for the 1 year workless – the first bar is the coefficient when just parental worklessness is in the model, the second bar is the coefficient when linked risks are added to the model, and the third bar is the full model including linked risks and protective factors. Please see Box 3 for the full list of protective factors.
- Filled bar means workless category is significantly different from reference category. Empty bar means category is not significantly different from reference category. The reference category is 0 years workless (persistently working)
- See LSYPE Technical Report for full details.

There were only three outcomes for which the association with parental worklessness remained statistically significant after the inclusion of the interlinked risks *and* protective factors. These were the associations between parental worklessness and GCSE point score, the probability of being NEET, and the number of months spent being NEET. For these outcomes parental worklessness was an independent risk factor *over and above* the effect of the linked risks and potential protective factors included in the model.

For example, Figure 8 shows the association between parental worklessness and the number of months the young person was NEET. The relationship decreased considerably when the linked risks were accounted for and reduced further when the protective factors were added to the model. The final model, which took all linked risks and protective factors into account, suggests both temporary and persistent parental worklessness had an independent impact on young people being NEET, over and above the effects of the interlinked risk and protective factors. The final models suggest that two to three years of parental worklessness increased the number of months a young person spent NEET by approximately 1-2 months.

Figure 8 Association between parental worklessness and months of being NEET



Notes:

- The dependent variable is the number of months the young person was NEET across almost a three-year period after year 11 (September 2006 - May 2009) when the young person was aged 15-18.
- Each bar represents the coefficient for the stated workless category. For example, the first set of three bars are the coefficients for the 1 year workless – the first bar is the coefficient when just parental worklessness is in the model, the second bar is the coefficient when linked risks are added to the model, and the third bar is the full model including linked risks and protective factors. Please see Box 3 for the full list of protective factors.
- Filled bar means workless category is significantly different from reference category. Empty bar means category is not significantly different from reference category. The reference category is 0 years workless (persistently working)
- See LSYPE Technical Report for full details.

4.3 Summary

Young people whose parents experienced two and three years of worklessness had an increased risk of being NEET and spent more months being NEET - even when a range of linked socio-economic risks and protective factors were taken into account. The magnitude of the independent effect of parental worklessness was relatively modest; young people whose parents were workless experienced between one and two months more being NEET than young people whose parents were not workless. However, the findings suggest that parental worklessness was an independent risk factor associated with the young person being NEET and provides some evidence of an intergenerational transmission of

worklessness. It is also important to note that there was relatively little difference in the magnitude of the relationship between two or three years of parental worklessness and the probability of the young person being NEET at age 18 or the number of months being NEET between ages 15-18. This implies that growing up in a workless household (including temporary worklessness) significantly increased a young person's risk of being NEET and spending longer time being NEET.

Workless families in the LSYPE also faced a number of other interlinked linked risks – such as low parental education and poor parental mental and physical health. Parental worklessness had a more negative impact on young people's probability of being NEET and how long they spent being NEET if the family simultaneously faced many other types of socio-economic disadvantage. Further, some of these other linked risks had themselves an independent effect on the likelihood of a young person being NEET and spending longer NEET, regardless of whether the parents were workless or not. Hence whilst parental worklessness is clearly one risk factor associated with an increased probability of the young person being NEET and spending more months being NEET, other risk factors are also implicated.

Teenagers in workless households also achieved less well at GCSE (measured by their average GCSE point score⁷). This finding holds even after taking into account a range of interlinked risks and protective factors. The magnitude of this effect is relatively modest however. For example, a young person with three years of parental worklessness would expect to have an average GCSE score 14 points lower than a young person with similar characteristics who lives in a household with no worklessness parents. This is roughly equivalent to a drop in just one GCSE from grade B to grade D.

In terms of protective factors, there was some evidence to suggest that parents' engagement in their children's education, for example by attending parents' evenings, speaking to teachers about schooling, and making sure the child does his or her homework reduced the association between parental worklessness and poor GCSE attainment – as did young people's engagement with education, particularly wanting to stay on in full-time education and not playing truant, as well as having peers who want to continue in higher education.

The story is different for the other outcomes. The probability of gaining 5 A*-C GCSEs (i.e. whether they achieved these or not) and young people's intentions

⁷ As measured by the new total point score used by the Department for Education <http://www.education.gov.uk/performance/tables/nscoreingsys.shtml>

to remain in education past age 16 did not remain significantly associated with parental worklessness after other interlinked risk factors were taken into account. The association between parental worklessness and general mental health was non significant even before interlinked risks were added to the model. The association between parental worklessness and teenage parenthood became insignificant when the interlinked risk factors were taken into account. The association between persistent worklessness and feelings of lack of control, education aspirations and attitudes to school became insignificant once we controlled for the inter-linked risk factors and the protective factors.

In conclusion, teenagers living in a workless household were more likely to be NEET, spend longer time in NEET and achieve lower grades at GCSE. This association could not be fully explained by other interlinked risk factors, such as low parental education, poor parental health and marital status, or a range of potential protective factors. Hence we have identified an independent negative effect from parental worklessness for these three outcomes. It is particularly worrying that in the teenage years household worklessness is likely to increase the chances of a young person becoming NEET and remaining NEET given that this has a long run impact on labour market participation and early unemployment.

5 Conclusions

In this research we investigated worklessness amongst current cohorts of parents with dependent children, and the impact that living in a workless household had on children (aged 7 years) and young people (aged 15 to 18 years). Around one in ten children in our data experienced persistent parental worklessness over a number of years and hence this is an issue affecting a significant minority of children and young people. Further, certain groups are particularly vulnerable to parental worklessness. Families that were particularly likely to be persistently workless were those where the mother had been a teenage mother, where parents had lower levels of education, single parent families, and those where a parent had a long-term limiting illness. Hence parental worklessness is associated with other risk factors that also impact on children and young people's outcomes, and in our modelling we were careful to allow for these other risks, and indeed the cumulative multiple risks faced by some children.

Our research explored the relationship between parental worklessness and their children's experiences in the school system (at key stage 1 and key stage 4),

their cognitive development and academic attainment, their behaviour adjustment, their attitudes and aspirations regarding education, and their experiences in the transition from school to work.

We attempted to identify the role of specific protective factors that further reduced the association between parental worklessness and children's and young people's outcomes, after controlling for linked socio-economic risks. For example, positive school experiences played an independent role in supporting the academic attainment of young children (KS1) in workless households. In adolescence (KS4), a young person having a good attitude towards school also reduced the association between parental worklessness and lower GCSE achievement. This would imply that fostering good engagement with school is potentially one route to minimise the effects of parental worklessness on children and young people. However, we must be clear that our evidence does not necessarily indicate that having a positive school experience *caused* these children to avoid the negative outcomes from parental worklessness. For example, it may be that children in workless families who had particularly attentive parents may have avoided the negative outcomes from worklessness and their children also enjoyed school more. Clearly enjoyment of school is not a causal factor in this case. Hence careful interpretation of the role of protective factors is needed. However, it is nonetheless interesting to note that school experiences were significant factors mediating the relationship between parental worklessness and poor outcomes.

We concluded that young children (age 7) in primary school who experienced living in a persistent workless household did indeed have poorer outcomes. For example, they had poorer cognitive development, lower academic attainment at key stage 1, poorer behavioural adjustment and lower levels of wellbeing. Yet the association between parental worklessness and some of these outcomes was largely – but not completely - attributable to the other (multiple) risk factors that such families and these young children faced. Nonetheless there remained a significant independent association between parental worklessness and Key stage 1 reading performance, maths, and science, even after controlling for interlinked risks and protective factors.

Young people in workless families achieved somewhat lower GCSE scores (KS4) than young people with working parents (though they were not less likely to achieve 5 A*-C GCSEs). These results held even when we allowed for a range of interlinked risk and protective factors, though the independent effect of parental worklessness was modest in size. For example, young people in

persistently workless families achieved, on average, a GCSE points score 150 points lower than young people in persistently working families – however, after controlling for all linked and protective factors the independent effect of parental worklessness was just 14 points. Worklessness was not however independently associated with a range of other outcomes, such as the young person's mental health and teen pregnancy, once we included linked risks and protective factors. More positively, young people in workless families were actually less likely to take drugs regularly.

Our particular interest was to identify whether there was an inter-generational link between parental worklessness and the young person's likelihood of being unemployed at a young age. On this issue, we **did** find evidence that young people living in workless families were at increased risk of becoming NEET themselves and spending more months being NEET. This relationship was observed even when we allowed for other linked risk factors that also influence whether a young person is NEET, such as parental education level, parental health, or level of unemployment in the local area (IMD score), as well as controlling for a range of potential protective factors comprising characteristics of the young person, their parents or their school environment. Further, parental worklessness had a more negative impact on young people's chance of employment if the family simultaneously faced many other types of socio-economic disadvantage. This finding is suggestive of an intergenerational transmission of worklessness. We caveat this result however, by noting that this relationship may be caused by unobserved characteristics of workless families (not included in our analysis) that increase the chance of a young person being NEET, and we have not proved a **causal** inter-generational relationship. For example, it may be that parents who were workless lived in areas that had very few job opportunities and hence their children also struggled to find work. Whilst we control for the unemployment rate of the area they lived in, our model may not capture fully the opportunities available in terms of work,

It is also important to note that to the extent that there was an inter-generational transmission of worklessness in our data, we did not find evidence that this was caused by young people in workless households having poorer attitudes towards education or work. In models that took account of the attitudes of parents and children, we still found a relationship between household worklessness and an increased chance of a young person being NEET. This is important for policy, suggesting it is not simply a matter of workless parents imparting negative attitudes towards work to their children.

Some of our findings in LSYPE also suggested that not only persistent worklessness but also the temporary experience of worklessness is significantly associated with negative outcomes (if not more so) among young people. This may be because of the impact of other events associated with temporary worklessness, such as moving in and out of employment, marital breakdown or a new partnership. Whilst we could allow for some of these events in our model (e.g. marital breakdown), there may be other changes we cannot fully account for. We would therefore not conclude that temporary parental worklessness is 'worse' than persistent parental worklessness. In any case, in the LSYPE data we observe individuals' work status over a relatively limited period of time (3 years), and temporary parental worklessness is experienced by only 7% of families in the sample.

These findings have significant policy implications. First, parental worklessness is one of many factors that put children and young people at risk of poor outcomes. Hence for many workless families there are multiple issues that sit alongside being workless, and our evidence suggests that policy needs to deal with a range of inter-linked problems. Targeting parental worklessness on its own, is unlikely to be successful.

We did find evidence of a potential inter-generational workless cycle. However, again much of the apparently strong relationship between parental worklessness and the young person being NEET or being NEET for longer is attributable to other linked risks (parental education, poverty, long standing illness). This too would imply that breaking this inter-generational relationship is likely to involve the need to tackle the wider range of risks that face these young people and their parents.

We found some evidence of early scarring effects, i.e. parental worklessness impacted on the developmental outcomes of young children (age 7) in primary school, even after allowing for the linked risk and protective factors. This might imply that attempts to minimise the impact of worklessness should focus on interventions in the early childhood and the primary phase. However, we also found that parental worklessness impacted on young people's achievement in school, i.e. their average GCSE score point at age 15, as well as their school to work transition between ages 15 to 18. Hence we found evidence of the effects of worklessness in both early childhood and adolescence. It is thus, never too early or never too late to intervene.

In summary, the evidence presented gives only partial support to a policy agenda targeted at workless households per se. We found significant associations between parental worklessness and a range of outcomes in children and young

people. However, it was not parental worklessness per se that caused poorer outcomes but rather the complex needs and numerous socio-economic risks faced by workless families. The negative impacts of parental worklessness were largely explained by co-existing risk factors experienced by workless families, such as low parental education, family instability (e.g. divorce or separation), health problems, poor housing, and income poverty. This suggests the need to tackle the wider range of risks these families face. Our report cannot determine whether we should tackle the underlying *sources* of these risks (e.g. family poverty, poor parental education etc.) or whether we need to deal directly with the *consequences* of these risks (e.g. poor achievement of the children and young people). What our research does clearly show however, is that a policy that is targeted only on getting parents back into work is unlikely to produce large benefits for their children, unless the other risks that these children and their families face are also reduced or removed.

On a positive note, our findings show that young people growing up in workless households are less likely to take drugs than their peers living with working parents. This finding might seem trivial, as young people in workless families are less likely to have the money to buy drugs, yet given the persistent debate regarding the culture of poverty and the 'underclass' the findings might contribute towards a better understanding of the situation of workless parents and their children having to succeed against the massive odds that are stacked against them.

Future research should examine in more detail the combination and patterns of risks in workless families and their development over time, to gain a better understanding of the complex challenges involved, the severity and chronicity of risk exposure.

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